

The right genital gland, 47 millim. in length, appeared to be of entirely ovarian nature, and contained many large ova which protruded from its surface. The posterior extremity of the gland was ruptured, but whether before death or from subsequent handling I am unable to say.

The right duct, 73 millim. long, is a delicate tube attached to the ventral wall of the swimming-bladder, and extending from the posterior end of the gland to its termination in the urogenital chamber; there were three ova lodged in the duct at the latter point; and a short distance in front the duct was ruptured.

The left genital gland is 59 millim. in length. At 26 millim. from its anterior extremity the ovarian structure is replaced by testicular, this testis region being 16 millim. long and 5 millim. broad; it is abruptly defined by a constriction from the ovarian region in front, but posteriorly expands into the second portion of the ovary. The form of the testis is roughly that of a three-sided prism with a shallow groove in the middle of its ventral face.

The left duct is similar to the right, but is unruptured; they open side by side in the anterior wall of the urogenital chamber.

There are two special points of interest in this case. Firstly, that from self-fertilized eggs healthy and normal young were reared; secondly, that this fish was fundamentally a male (as evidenced by the possession of genital ducts), the greater part of whose genital glands had acquired an ovarian structure. It is also, so far as I am aware, the first instance recorded of the occurrence of hermaphroditism amongst the Salmonidæ.

On a Hermaphrodite Mackerel, *Scomber Scomber*.

By Prof. CHARLES STEWART, Pres. Linn. Soc.

[Read 4th June, 1891.]

(PLATE III.)

MR. W. B. TEGETMEIER has recently presented to the Museum of the Royal College of Surgeons a hermaphrodite Mackerel; and as there are very few cases on record, and this specimen has some unusual features, I have thought it desirable to give a brief account of it. The fish was 400 millim. long, and was received by

me in a perfectly fresh state; but as it had been cleaned by the fishmonger, its girth could not be determined. The genital organs had been detached from the dorsal wall of the body-cavity, but were still connected with the uro-genital pore.

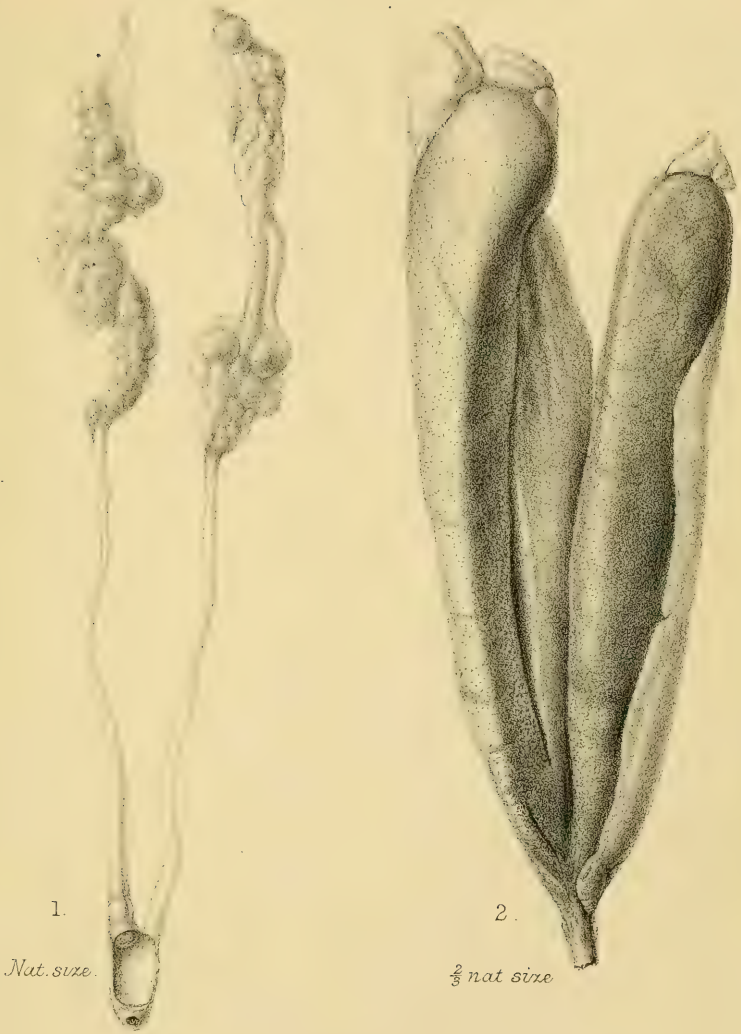
The right ovary is full of well-developed ova. It is 150 millim. in length; in front it has a rounded commencement with a diameter of 27 millim., and from this point gradually tapers to the posterior extremity. Along the whole length of the dorsal border of the ovary extends a testis which somewhat exceeds the ovary in bulk; it slightly overlaps the outer surface of the ovary, and still more so the inner; the posterior portion of the inner surface of the ovary for a distance of 15 millim. has the testicular structure, and is directly continuous with the general body of the testis above. In front the testis projects 16 millim. beyond the ovary, and has to its inner side a bilobed mass of testis in contact, but apparently not continuous, with the main body.

The left ovary is 134 millim. long. In front it has about the same diameter as the right; but this diameter is retained until about 40 millim. from the posterior extremity, when it begins to taper. The natural bulk of the left ovary somewhat exceeds the right.

The whole length of the dorsal border of the left ovary, with the exception of 15 millim. at its exterior extremity, gives attachment to a testis which overlaps the outer surface of the ovary for about half its diameter.

The extreme tip of the ovary is capped with a cocked-hat-shaped testis-mass having 14 millim. basal diameter. Dorsally halfway between the main body of the testis and the above-mentioned lobe is a small patch of testicular tissue flush with the general surface of the ovary.

Both ova and spermatozoa were perfectly developed, and the ovaries and testes of approximately equal size.



Mintern del.

Mintern Bros. lith.

GENITALIA OF HERMAPHRODITE FISHES.
1. SALMO FARIO. 2. SCOMBER SCOMBER.